

# Building on Regional Green Infrastructure Partnerships

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Grand Rapids, MI  
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# Regional Projects

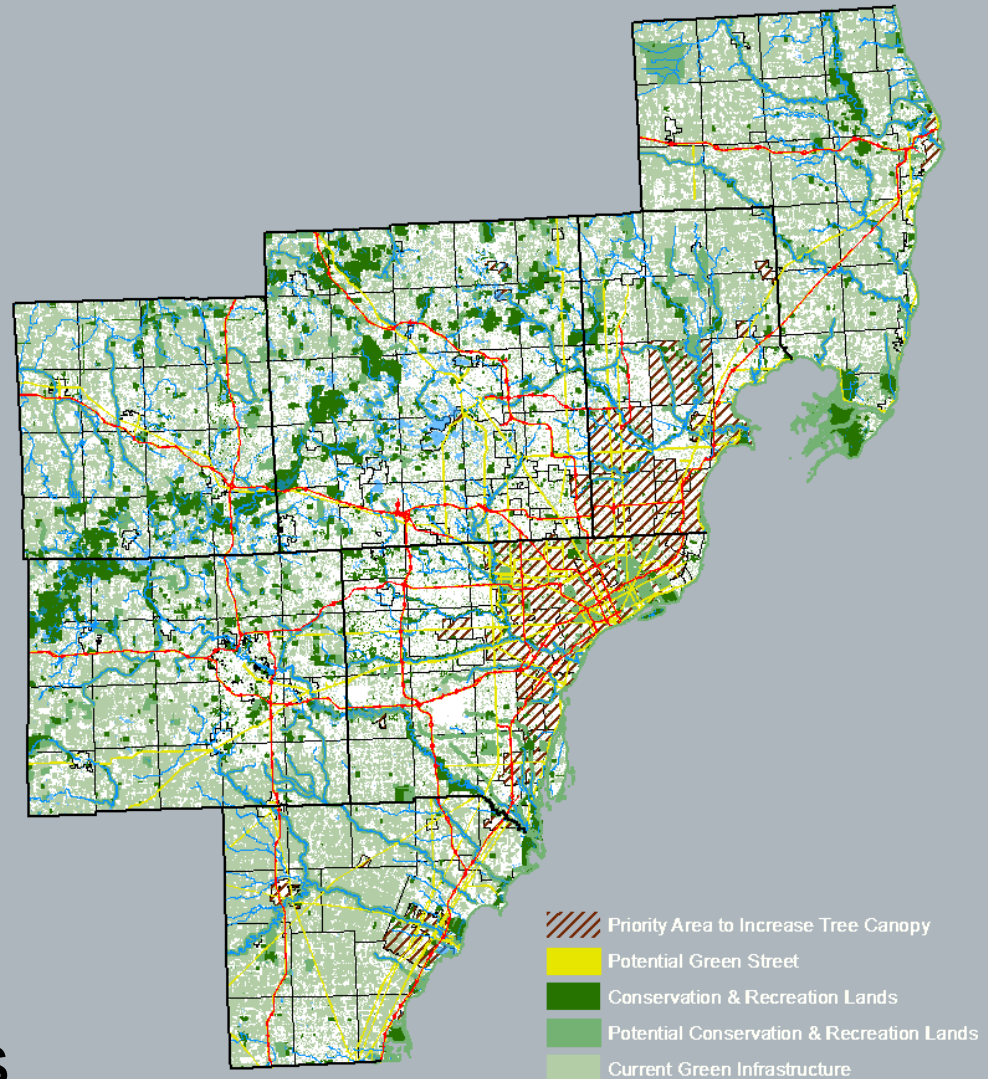
- ❖ Green Infrastructure Vision for Southeast Michigan
- ❖ Saginaw Bay Greenways
- ❖ Greening Mid-Michigan
- ❖ Planning with Green Infrastructure in Northwest Michigan
- ❖ INtegrated Valuation of Ecosystem Services Tool (INVEST) in West Michigan
- ❖ Growing Greener in Southwest Michigan



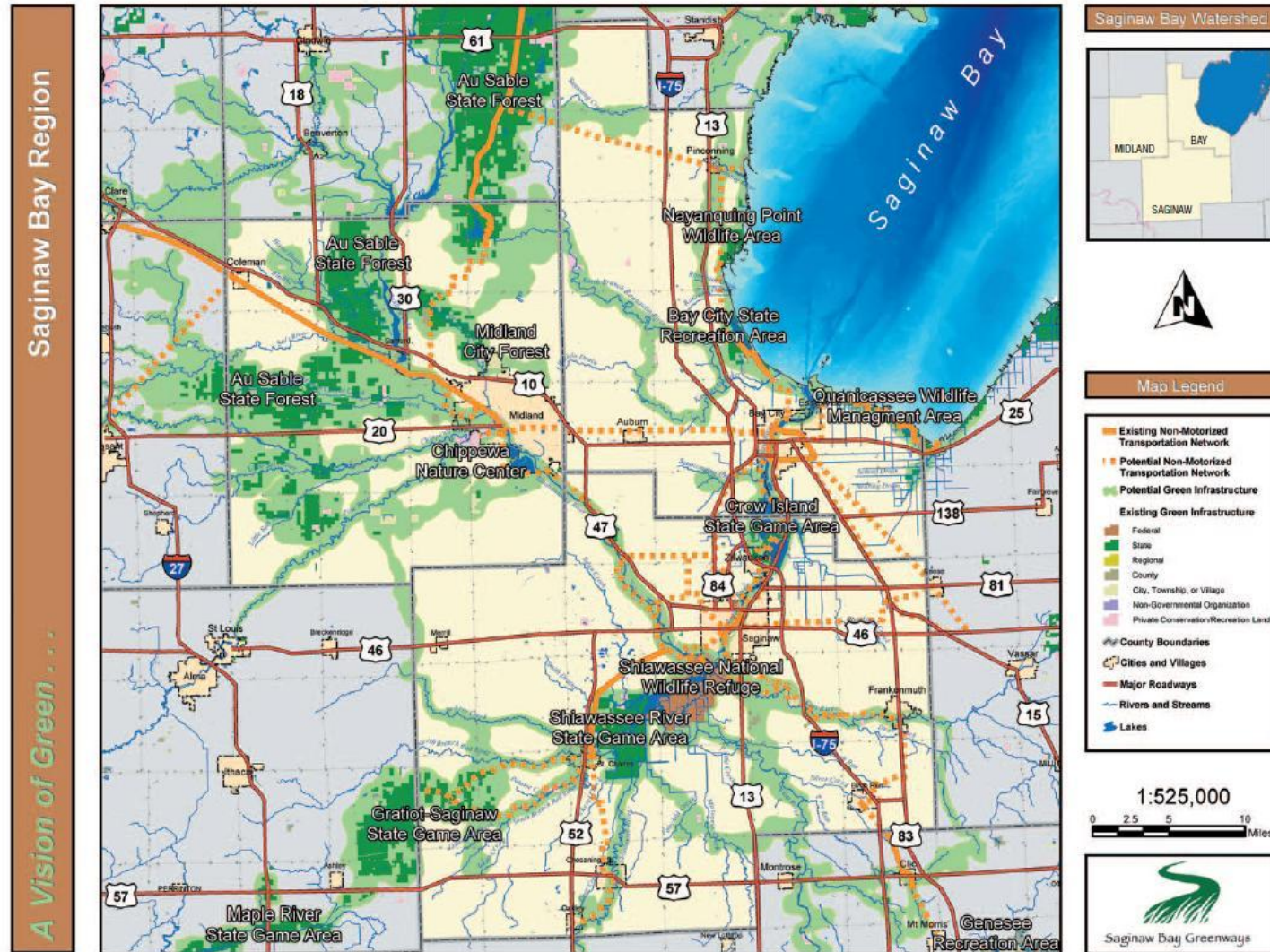
- ❖ Regional land use data to benchmark existing GI
- ❖ Vision sessions and public polling to learn what the region wants
- ❖ Regional policies for achieving vision

# Policy Priorities

- ❖ Increasing tree canopy
- ❖ Using GI on publicly owned properties, roads & parking lots
- ❖ Using vacant lots to increase connectivity and provide buffers
- ❖ Educating local officials



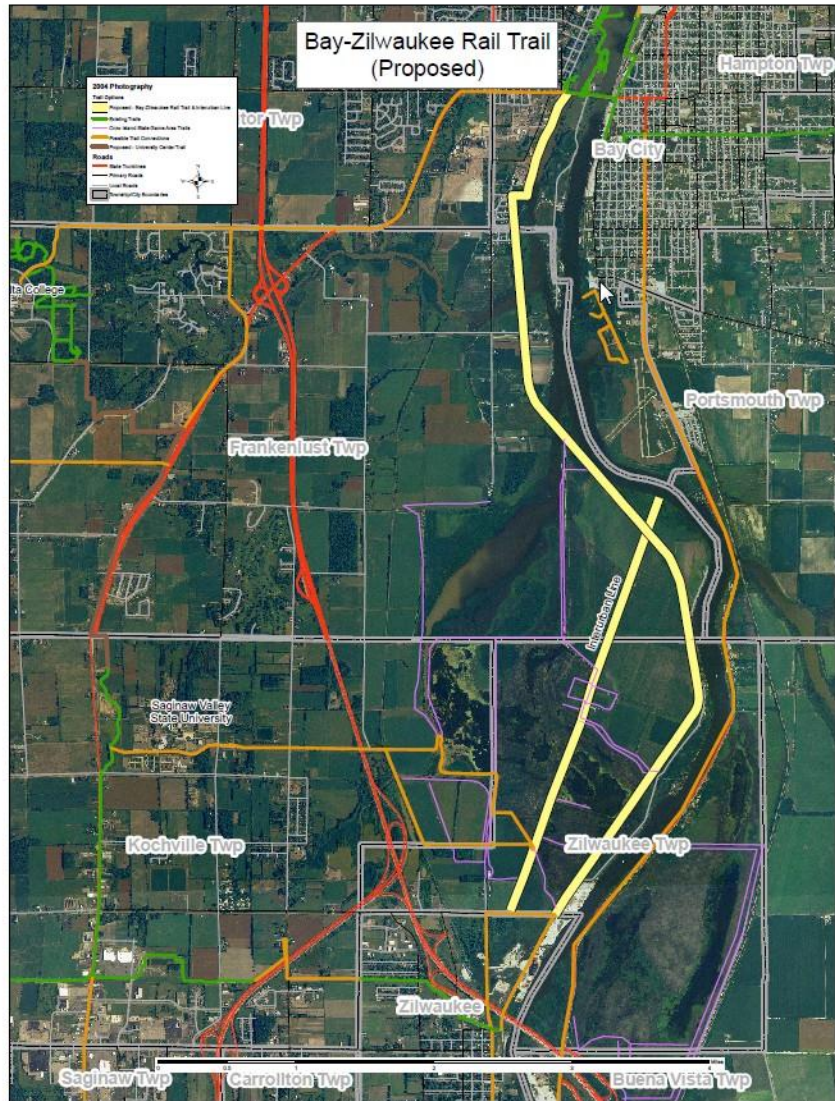
# Saginaw Bay Greenways



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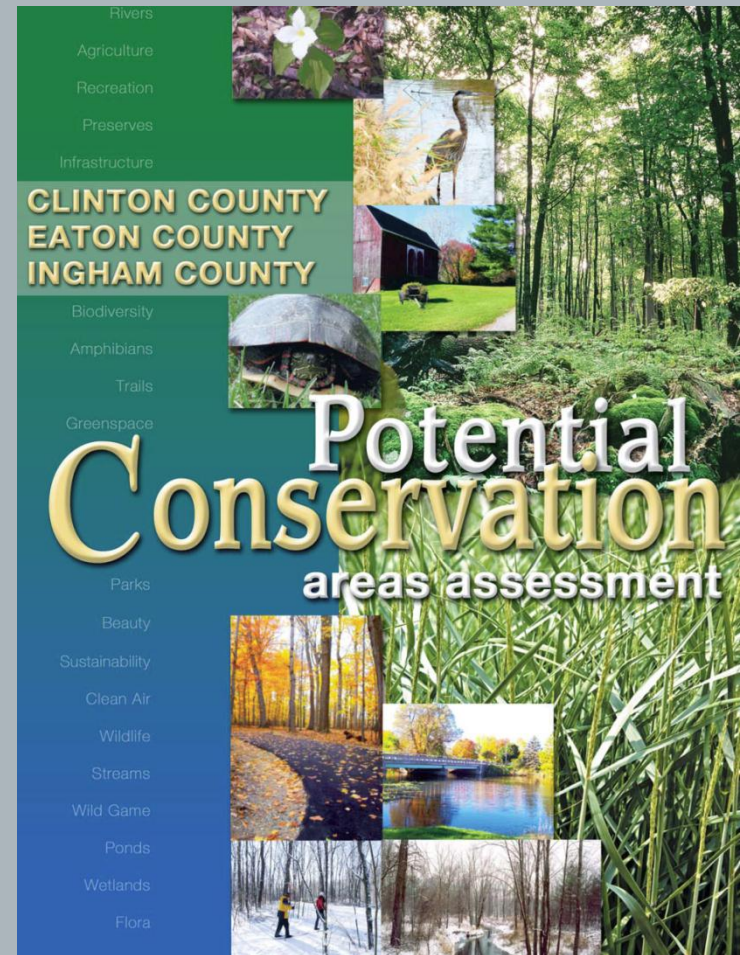
# Saginaw Bay Greenways



- ❖ Overlay for regional non-motorized transportation route
- ❖ Implementation by Great Lakes Bay Regional Trail Organization

# Greening Mid-Michigan

- ❖ Collaboration between Tri-County Regional Planning Commission, Eaton Conservation District & Michigan Trails and Greenways Alliance
- ❖ Developed scoring system to identify and rank areas for conservation efforts



# PCAs Recommendations (MNFI)

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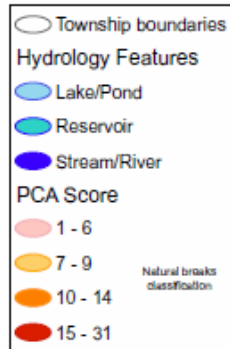
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## Tri-County Region

### Eaton County Potential Conservation Areas

Potential Conservation Areas (PCAs) are defined as places on the landscape dominated by native vegetation that have various levels of potential for harboring high quality natural areas and unique natural features. Scoring criteria used to prioritize sites included: total size, size of core area, length of stream corridor, landscape connectivity, restorability of surrounding land, parcel fragmentation, vegetation quality, and biological rarity score.

Data Sources: Tri-County Region land use/land cover, Michigan Natural Features Inventory (MNFI) Biotics Database (5/2007), Eaton County parcel layer, and the National Hydrologic Database (NHD) streams (1:100,000).

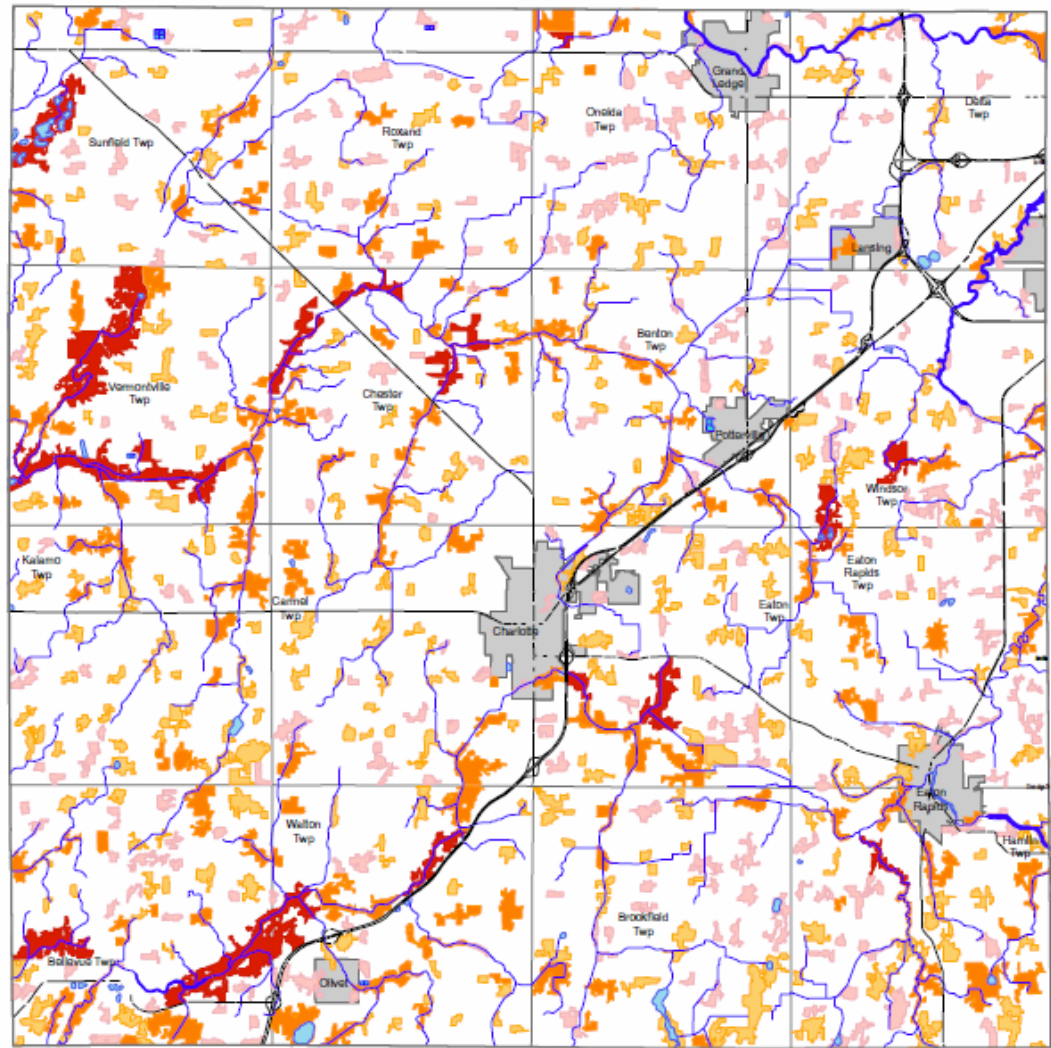


MCI  
EX

MICHIGAN STATE  
UNIVERSITY  
EXTENSION

Michigan Natural Features Inventory

MSU & U.S. Fish & Wildlife Service



# Use as Planning Tool

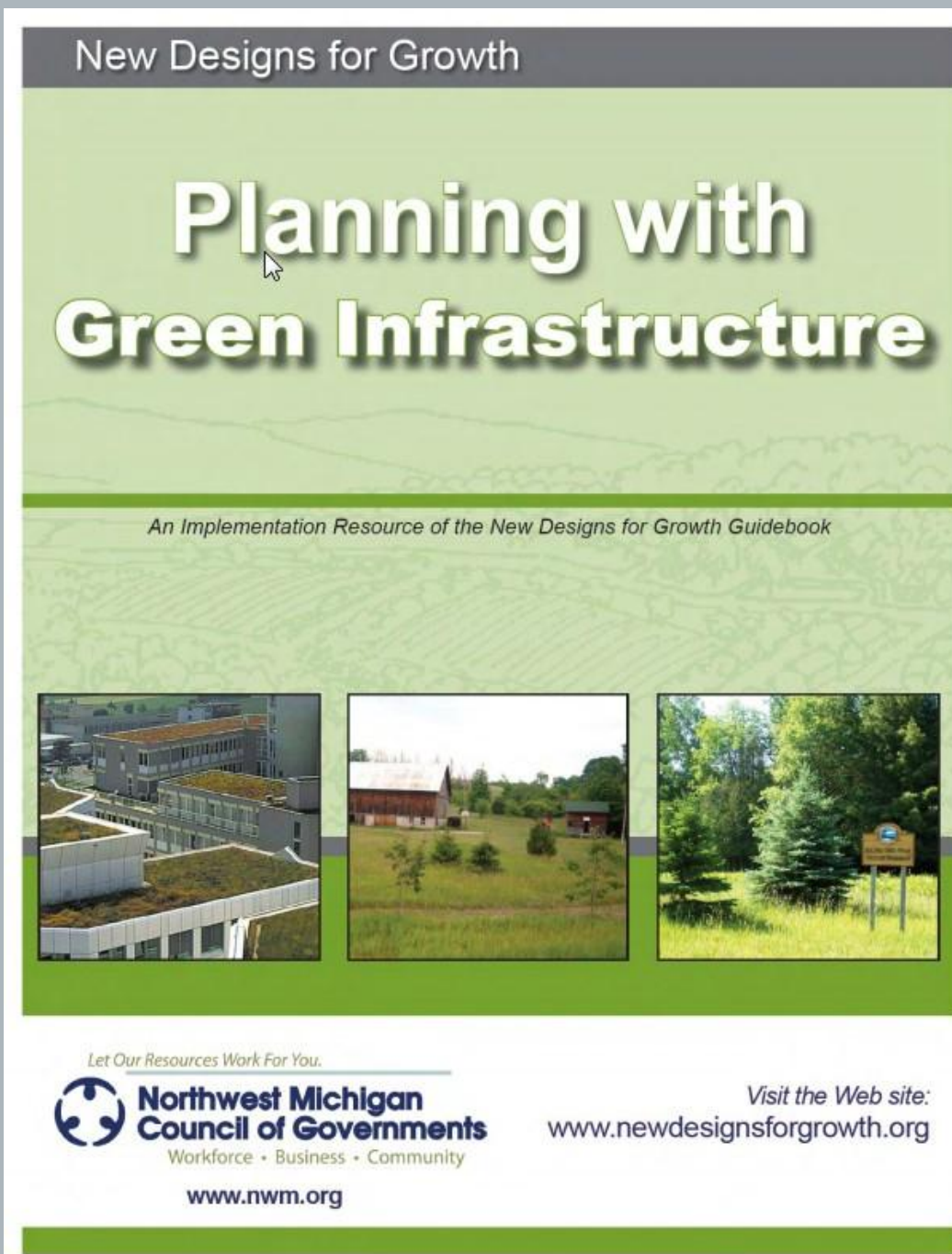
# ❖ Master Plan integration

## ❖ Link to existing greenways

## ❖ Local water quality plan integration



- ❖ GI implementation resource to assist local governments
- ❖ New Designs for Growth Guidebook based on 10 tenets of Smart Growth
- ❖ Implementation and outreach led by NWMCOG



# INVEST

❖ Online educational tool

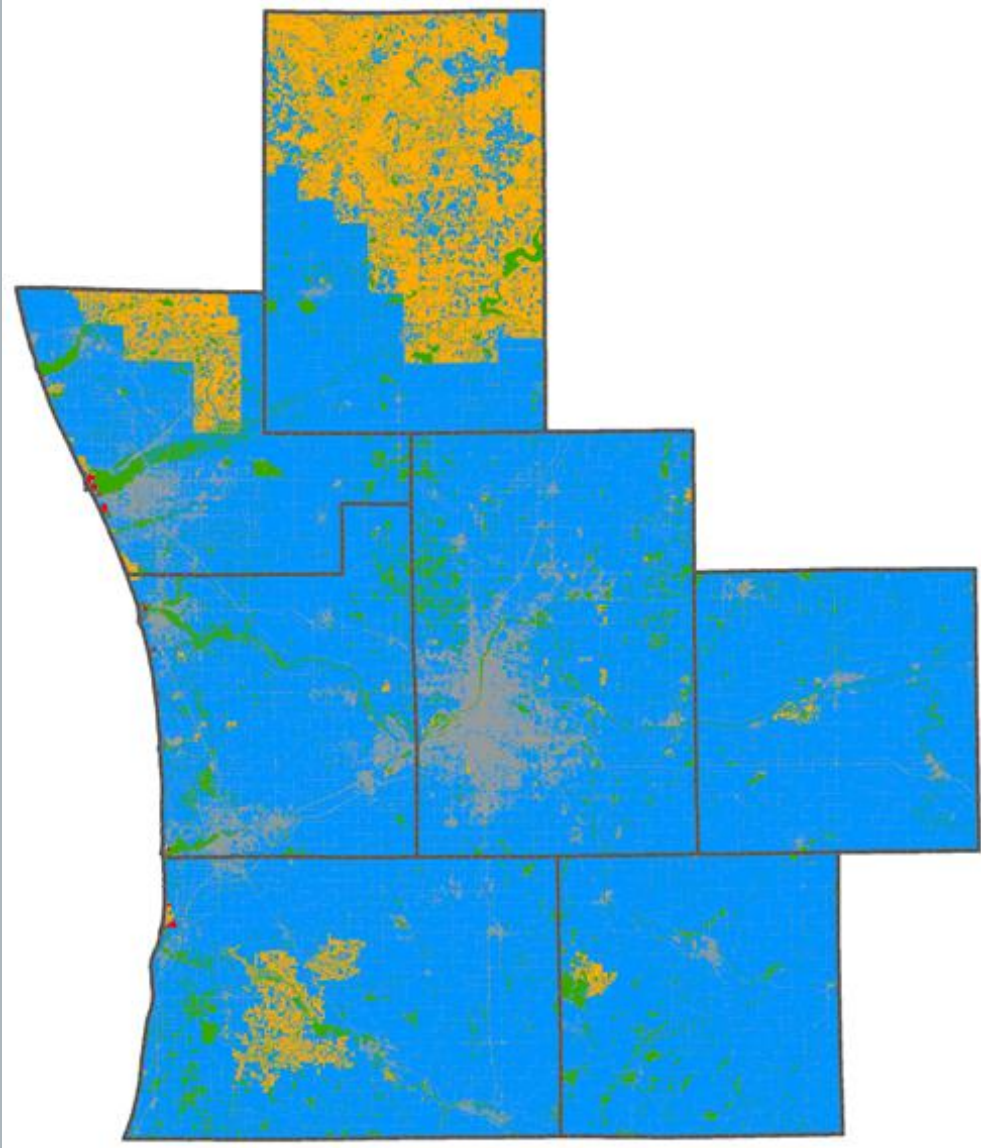
<http://INVEST.wri.gvsu.edu>

❖ Places monetary value on ecosystem services associated with West Michigan land uses

❖ \$ per acre/mile per year



# Regional Value Estimate for Ecosystem Services



**\$1.8 billion  
per year**

## Legend

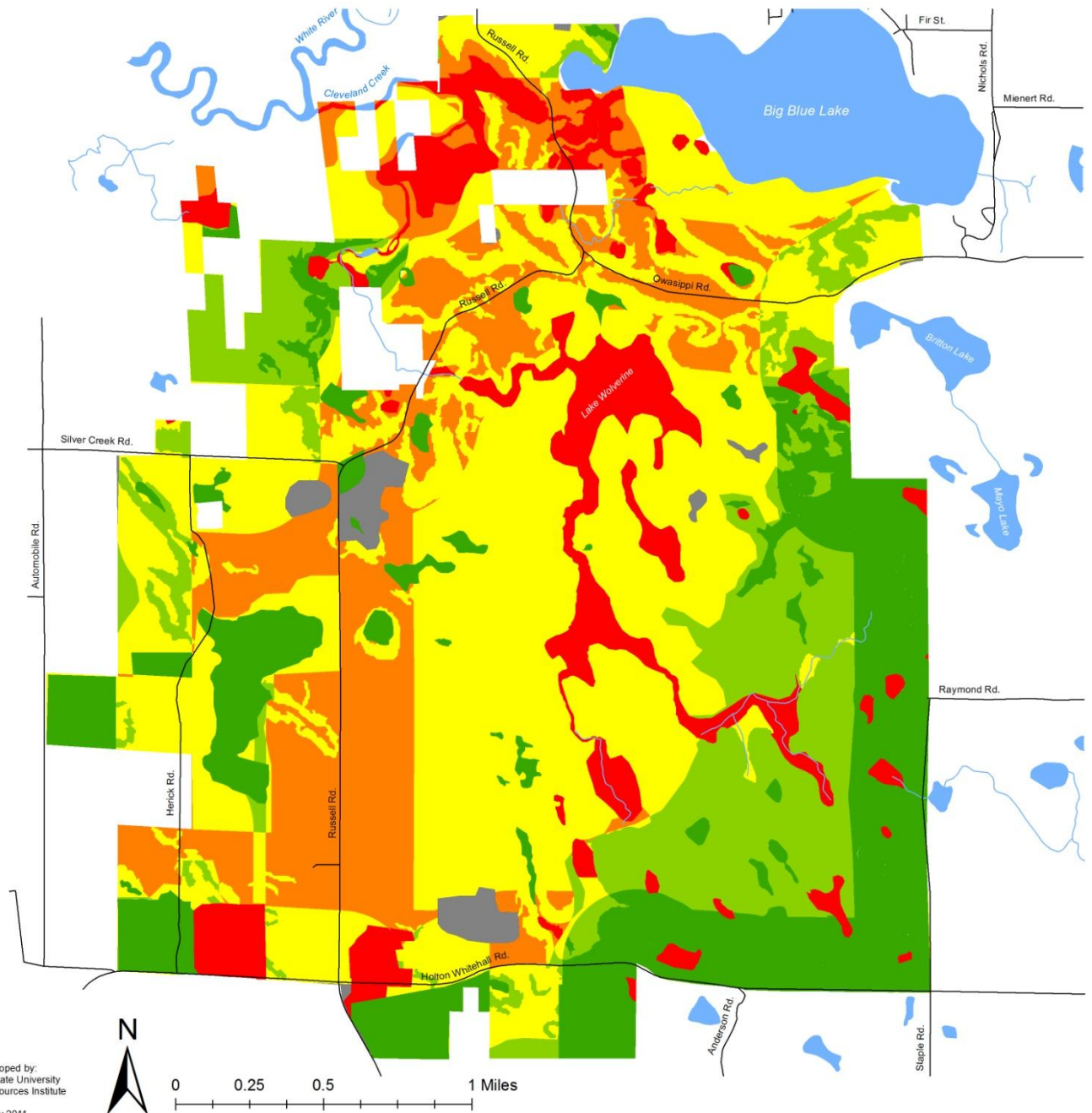
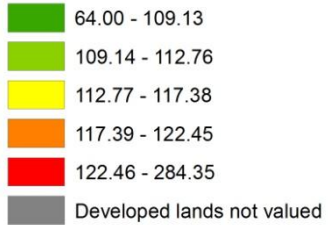
- **Red:** > \$10,000\*
- **Orange:** \$2,001 - \$10,000\*
- **Green:** \$201 - \$2,000\*
- **Blue:** \$0 - \$200\*
- **Grey:** Developed Area/Not Valued

# Valuations

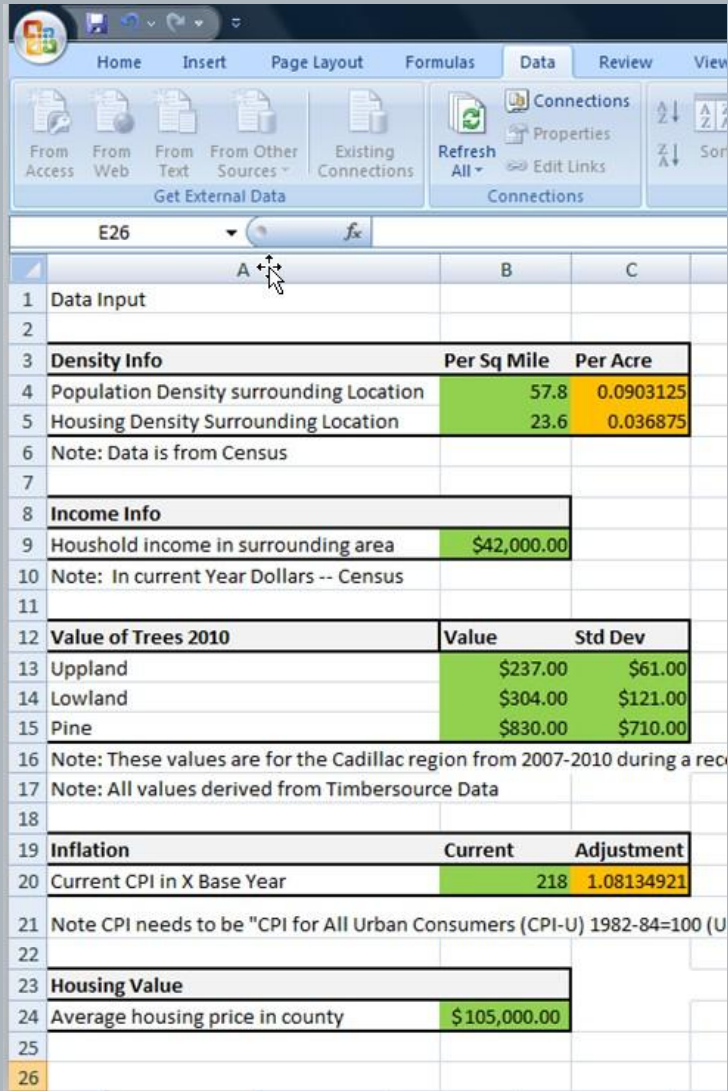
## Owasippe Scout Reservation

### Legend

#### Dollars Per Acre Per Year



# Ecosystem Services Calculator Tool



Density Info			
	Per Sq Mile	Per Acre	
Population Density surrounding Location	57.8	0.0903125	
Housing Density Surrounding Location	23.6	0.036875	
Note: Data is from Census			
Income Info			
Household income in surrounding area	\$42,000.00		
Note: In current Year Dollars -- Census			
Value of Trees 2010			
	Value	Std Dev	
Upland	\$237.00	\$61.00	
Lowland	\$304.00	\$121.00	
Pine	\$830.00	\$710.00	
Note: These values are for the Cadillac region from 2007-2010 during a rec			
Note: All values derived from Timbersource Data			
Inflation			
	Current	Adjustment	
Current CPI in X Base Year	218	1.08134921	
Note CPI needs to be "CPI for All Urban Consumers (CPI-U) 1982-84=100 (U			
Housing Value			
Average housing price in county	\$105,000.00		

❖ Current Value:  
\$582,526 per year

❖ Developed Value:  
\$183,196 per year

❖ Public Land/Access  
Value: \$1,450,383 per  
year

# Growing Greener in SW Michigan

- ❖ Multi-jurisdictional (3-county) initiative
- ❖ Creating a vision of GI
- ❖ Based on science and public input



# Challenges to Implementation

- ❖ Regional projects still need local implementation
- ❖ Regional data may not be specific enough at local level
- ❖ Lack of or limited funding
- ❖ Loss of momentum
  - ◆ Loss of project leadership
  - ◆ Changes in community leadership

# Successful Projects

## ❖ Green Streets in Southeast Michigan

- ◆ Oakland County Campus
- ◆ Great Lakes Green Streets Guidebook

## ❖ Collaborative Stormwater Management in West Michigan

- ◆ Plaster Creek Watershed
- ◆ Rogue River Watershed
- ◆ City of Grand Rapids

# Green Streets Grant EPA GLRI Funding



*Oakland County, MI*

[illegible]

- 260 acres actively managed
- 100 acres irrigated
- 5 miles of road

- Ponding Water - Soggy Turf-less Areas
- Road Runoff
- Large unused mowed areas



**North Focus Area**

15 individual native plant grow zones areas...

Areas that receive a majority  
of the county campus adjacent  
roadway runoff...

**OAKLAND COUNTY WATER RECLAMATION AUTHORITY**  
 Executive Office Building  
 10000 Lakeside Blvd.  
 Building #1 West  
 Oakland, Michigan 48240-2912  
 (482) 862-2222  
 www.oaklandwater.com

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**Mainland Drain**  
 Oakland County Campus

**V**

**Map Legend**  
 ■ Existing Sanitary Improvements  
 ■ Other Sanitary Area

**Map Projections**  
 North Arrow  
 Scale  
 Date: October 2010

**South Focus Area**

# Project Pictures



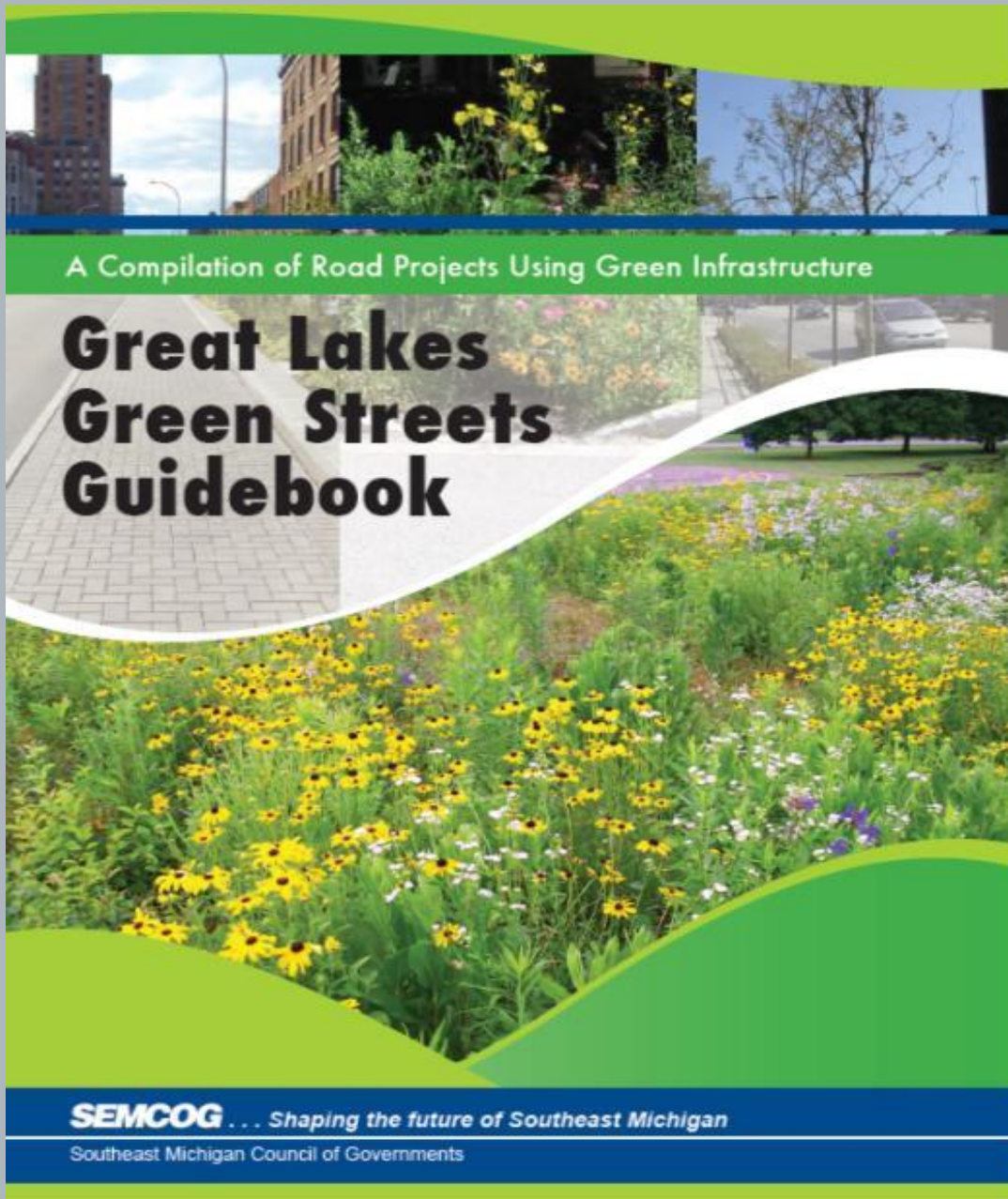
*Oakland County, MI*

# Project Outcomes



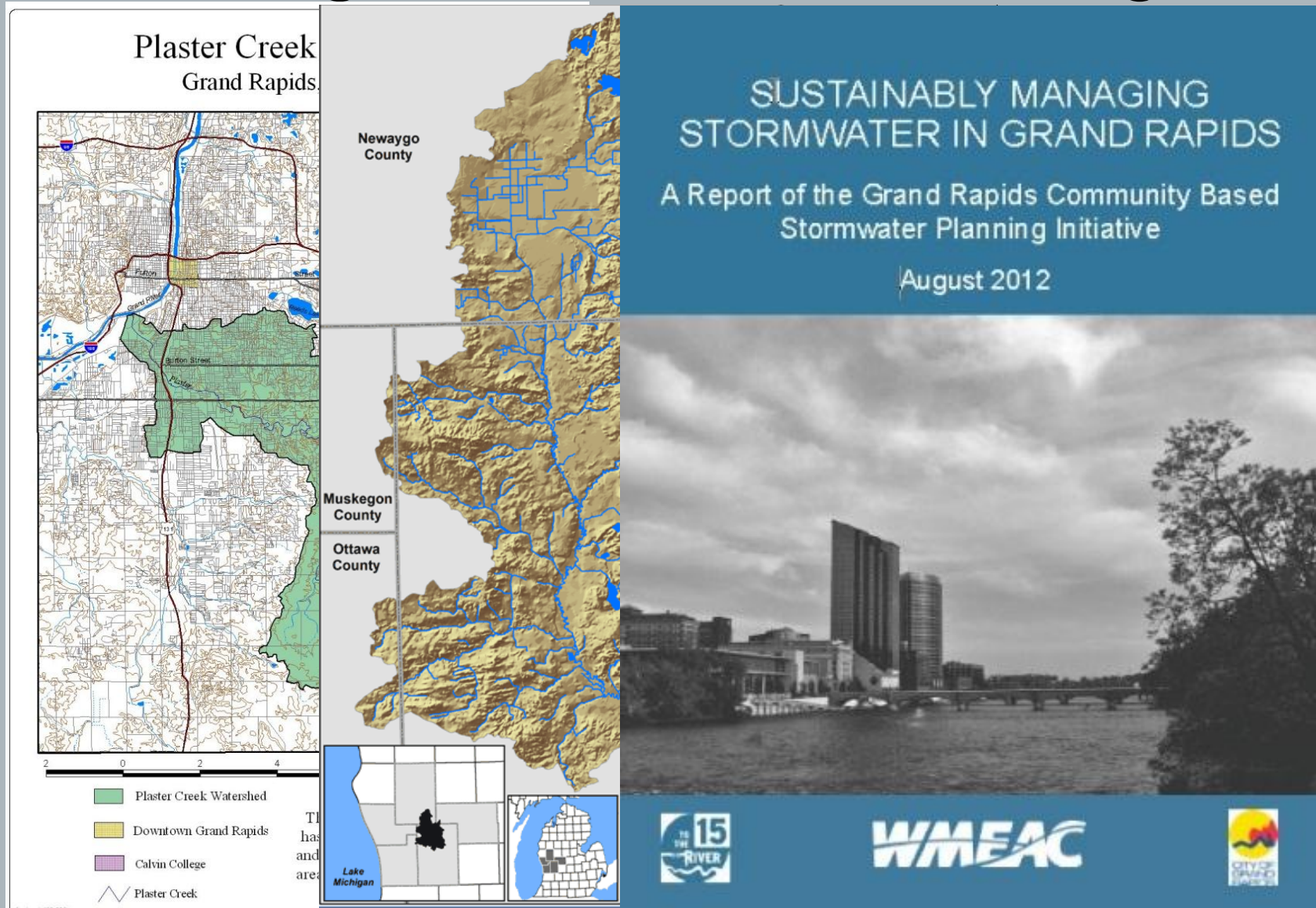
*Oakland County, MI*

- ❖ Oakland County Planning & Economic Development Services
- ❖ Oakland County Facilities Management



- ❖ 26 GI case studies in Great Lakes watershed
- ❖ Types of GI
- ❖ Barriers to implementation
- ❖ Importance of planning for stormwater management

# Collaborative Stormwater Management in West Michigan



# Plaster Creek 319 Project



Kent Conservation District

Center for Environmental Study (CES)

# Plaster Creek Watershed

- ❖ Most polluted tributary to the Grand River
- ❖ Restoration and LID implementation
- ❖ Education of watershed residents
- ❖ Planning Commissions and municipal boards
  - ◆ Master Plan and zoning ordinance review
  - ◆ Stormwater Advisory Committees



# Rogue River Watershed Stormwater Guidebook Project



AEB Community Planning Services

# Rogue River Watershed



- ❖ Development of Stormwater Guidebook

- ❖ Education of local planners and municipal officials

- ❖ Survey data analysis



# Grand Rapids Stormwater Management



# WMEAC/GR Ongoing-Partnership

- ❖ Community-Based Stormwater Initiative
- ❖ 15 to River
- ❖ Rain Barrel Program
- ❖ Sustainable Streets Taskforce
- ❖ Stormwater Asset Management Plan
- ❖ 2013 Flood Sandbag Volunteers
- ❖ Stormwater Oversight Commission
- ❖ Sustaining Stormwater Investments



# Sustaining Grand Rapid's Stormwater Investments

- ❖ Incentivizing LID
- ❖ Best Practices in Stormwater Management Opt-Out Systems Using LID
- ❖ Altering Local Codes and Ordinances in Grand Rapids to Include LID
- ❖ Establishing Measurable Goals and a Communication Strategy for Implementing LID in Grand Rapids

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